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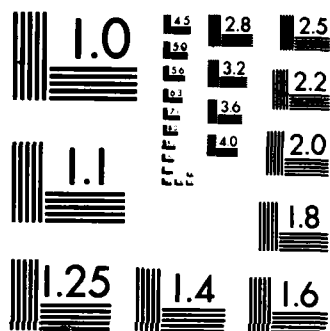
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COMMAND AND CONTROL CONSIDERATIONS FOR FIELD ARMY OPERATIONS:

A PRIMER ON JOINT OPERATIONS

AD-A174 133

by

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Armor

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ABSTRACT

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This study investigates the hypothesis that there is an increased requirement for command and control systems when US Army and Marine Corps forces conduct large unit joint operations as members of a field army. Based on this hypothesis, this study examines the employment of the US Tenth Army during the World War II Okinawa campaign (April-June 1945). The principal focus of this study is on the command and control system which directed the execution of the eighty-two day ground operation against the Japanese Thirty-Second Army on Okinawa. This study addresses the key question of how a field army, consisting of both Army and Marine Corps forces, might structure an effective command and control system in order to synchronize operational maneuver and air support for the purpose of defeating a concentrated enemy force.

The historical and contemporary analyses are performed by using the command and control guidelines which support the execution of AirLand Battle doctrine outlined in Field Manual 100-5, Operations (Final Draft, dated 28 October 1985). These guidelines include: the operational flexibility of the campaign plan; the ability of the command and control system to maintain the tempo of the operation in order to capitalize on success; and the need to optimize the use of time to facilitate the friendly force being more agile than the enemy.

The study concludes that there is a void in doctrinal material which prescribes how Army and Marine forces are to conduct joint field army operations. The study recommends: (1) Army and Marine service schools work together and develop a joint doctrine for employment of Army and Marine forces as a field army. (2) Joint field training exercises be conducted which would feature a corps composed of Army and Marine units versus a similar corps. (3) An Army and Marine joint study group on joint field army operations be established to examine how US armed forces can regain the joint operations proficiency in large unit ground operations they attained during World War II.

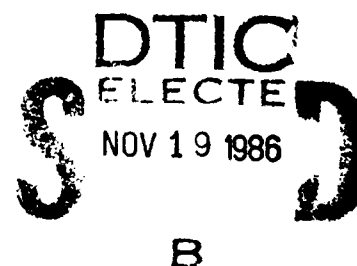
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SECTION I

INTRODUCTION

The ability of US armed forces to conduct joint operations at the operational level will determine success or failure in future conflicts. While the "jointness" concept has been emphasized increasingly in the context of professional military discussions and writings during the last five years, effective action has lagged behind the rhetoric and the concept has often been ignored completely.

Soviet imperialism and military adventurism have increased the importance of joint field army operations for the US armed forces in recent years. The Soviet Union has heightened its attack on US interests throughout the world during the last seven years. Its "indirect approach" toward world domination has been waged primarily in the Third World by Soviet surrogates fighting "wars of national liberation". The growing Soviet menace has prompted senior US military leaders to reassess the capability of Army and Marine Corps forces to execute large unit joint operations effectively.

A doctrinal void exists concerning the potential problems associated with large unit joint operations involving Army and Marine Corps units. US Army battle simulation exercises within the past several years have squarely confronted the possibility

that Army and Marine Corps forces will be employed within a field army in response to potential contingency missions. Nevertheless, little if any definitive documentation has been published which clearly articulates the potential problems associated with a field army composed of both Army and Marine Corps forces.

Considerable attention was devoted to large unit joint operations by the US Army's School of Advanced Military Studies (SAMS) at Fort Leavenworth, Kansas during the 1985 Southwest Asia exercise. Some of the major issues likely to arise during such operations were highlighted during this exercise by the simulated deployment of a field army and a US Marine Amphibious Force (MAF) to Iran at the request of the Iranian government. This request was generated in order to preclude a rebel Iranian military leader from forcefully overthrowing the central government and possibly interrupting the free flow of oil through the Strait of Hormuz. The US forces which deployed to Iran (including US Air Force units) ultimately fought three Soviet fronts, which attacked from the USSR and Afghanistan into Iran, and two divisions of Iranian rebels forces. One of most pressing problems which had to be addressed during the December 1985 SAMS Southwest Asia exercise concerned the command and control arrangements which would be required in order effectively to conduct large unit operations involving

Army and Marine forces. While the MAF fought adjacent to the US 9th Army, the MAF was never subordinated to the 9th Army. There was considerable discussion among SAMS faculty and students concerning the problems created by this arrangement and the command and control difficulties which were anticipated in the event that the MAF had become a subordinate unit of the 9th Army.¹

Finally, the 1983 deployment of US armed forces to Grenada reaffirmed the realities of executing joint operations and the lack of recent experience for the effective conduct of joint Army and Marine Corps operations. Operation URGENT FURY was undoubtedly an overall success and demonstrated the United States' resolve to crush communism in the Western Hemisphere. Nevertheless, critical shortcomings in the command and control of joint operations surfaced during the execution of ground operations. The lack of an overall land component commander and the lack of interface between Army and Marine Corps communications equipment were the major joint operational issues surfaced during Operation URGENT FURY. These flaws in joint operations have far-reaching implications since the Army and Marine Corps forces involved in ground operations on Grenada represented a fraction of those which would be involved in joint field army operations.

This study addresses joint operations at the operational

level of war. The US Army's AirLand Battle doctrine emphatically states that Army forces will routinely conduct future operations with other services as members of joint forces.²⁰ The operational level of war will be defined in this study as the level of war between strategy and tactics that is concerned with the execution of war plans, the planning of campaigns, and the sequencing of battles.²¹ The major function of the operational level of war is to sequence tactical activities (battles and engagements) so that they combine to achieve the aims of strategy. It can be argued that field army operations are not automatically conducted at the operational level, such as in a large mature theater of operations where army groups would have the primary responsibility for conducting war at the operational level. Nevertheless, in a contingency theater the field army would certainly have initial responsibility for conducting war at the operational level until army groups were established in the theater.

For the purpose of this study, command and control will be defined as the exercise of command as a means to implement the commander's will in pursuit of the unit's objectives.²² The essence of command and control lies in applying leadership, making decisions, issuing orders, and supervising operations.²³ Based on the definition of command and control mentioned above, a command and control system can be further defined as

those procedures and techniques which allow a friendly force to function more rapidly than the enemy force in order to synchronize battles and engagements and which contribute toward the decisive application of combat power. The command and control systems which are examined in this study focus on: the operational flexibility of the campaign plan; the ability of the command and control system to maintain the tempo of an operation in order to capitalize on success; and the need to optimize the use of time to facilitate the friendly force functioning more effectively and quicker than the enemy.

This study has been undertaken to examine the hypothesis that there is an increased requirement for command and control systems when Army and Marine Corps forces conduct joint operations as members of a field army. Based on this hypothesis, this study addresses the key question of how a field army, consisting of both Army and Marine Corps units, might structure an effective command and control system in order to synchronize operational maneuver and air support for the purpose of defeating a concentrated enemy force.⁶ Other questions which have been addressed in this study because of their relevance to the question mentioned above include:

- (1) What does the historical experience of the US Tenth Army during the Okinawa campaign (1945) suggest are effective principles of command and control for synchronization of

operational maneuver and air support for a field army consisting of Army and Marine forces? (2) What are some of the most significant changes in technology and doctrine that have taken place since World War II which might affect the joint employment of Army and Marine Corps forces in a field army today? (3) What would be a likely scenario which might require the employment of Army and Marine forces as a field army? (4) Based on contemporary capabilities and organizations as well as a likely scenario, what principles should govern the structure of a joint command and control system for the synchronization of operational maneuver and air support by a field army which consists of Army and Marine forces?

Two assumptions have been made in order to limit the scope of the problem considered in this study. First, joint operations will be required in selected campaigns and major operations in the future in order to achieve the goals of US strategy and the theater commander's campaign objectives. Second, US Army forces and US Marine Corps forces can conduct joint operations without adversely affecting the individual capabilities of the forces concerned.

The methodology used in this study is to begin with an examination of the employment of the US Tenth Army during the World War II Okinawa campaign (April-June 1945). The principal focus of this examination is on the command and control system

which was used to direct the execution of the eighty- two day ground operation which defeated the Japanese Thirty-Second Army on Okinawa. Additionally, this study highlights how interservice cooperation contributed to the flexible operational employment of Army and Marine forces as they executed operational maneuver in conjunction with air operations during the Okinawa campaign. Relevant recommendations for the command and control of joint operations by US armed forces today have been included in this study. The historical and contemporary analyses have been performed by using the command and control guidelines which support the execution of AirLand Battle doctrine outlined in Field Manual 100-5, Operations (Final Draft, dated 28 October 1985). These guidelines include: the operational flexibility of the campaign plan; the ability of the command and control system to maintain the tempo of the operation in order to capitalize on success; and the need to optimize the use of time to facilitate the effective performance of the friendly force and enable it to gain an advantage in agility over the enemy.

SECTION II
OPERATIONAL PLAN FOR JOINT OPERATIONS ON OKINAWA
APRIL-JUNE 1945

Capturing Okinawa was the final American objective in the World War II Pacific campaign before US forces invaded Japan in 1945. The planned invasion of Okinawa by US forces represented the culmination of almost three years of fighting against formidable Japanese forces in the Pacific Theater of Operations. From the initial campaign at Guadalcanal (August 1942-February 1943) to the latest struggle on Iwo Jima (February-March 1945), the US forces' Pacific strategy remained focused on taking the war to the Japanese mainland.

As early as 1943, senior Allied officials had begun planning a Pacific strategy which would culminate in an invasion of the Japanese mainland. During the Sextant Conference in Cairo, Egypt in 1943, President Franklin Roosevelt and Prime Minister Winston Churchill established a time-table for prosecution of the Pacific war.⁷ Specifically, a coordinated, converging, two-pronged drive would be mounted across the Central Pacific and up from the Southwest Pacific to gain US bases from which attacks were to be launched against Formosa, Luzon, and the China coast in the spring of 1945.⁸

Throughout the early planning phases of 1944, joint planners were divided concerning the importance of invading

Formosa. The Joint Chiefs of Staff settled this controversy and decided that an invasion of Formosa was not feasible based on the number of casualties expected to be sustained by US forces. The Joint Chiefs of Staff decided instead that the successful invasion of Okinawa would provide a better staging area for the planned invasion of Japan, since its capture would allow the establishment of American bases within 350 miles of the Japanese mainland. Once the Formosa operation was cancelled, planning for the invasion of Okinawa (Operation ICEBERG) proceeded rapidly.

Command relationships for Operation ICEBERG were joint by design and specially tailored for this operation (See Appendix A). Admiral Chester W. Nimitz, Commander in Chief, Pacific Ocean Areas (CinCPOA) prescribed the Army-Navy command relationship for Operation ICEBERG. By his direction the officer commanding the operation (Commander, Fifth Fleet, Admiral Raymond A. Spruance) was to be responsible for determining when the amphibious phase of the operations at each objective had been completed. At such time, he was to direct that the command of all forces on shore at that objective be assumed by the Commanding General, US Tenth Army, (Lieutenant General Simon B. Buckner, Jr., USA) who would then be responsible to Admiral Spruance for completing the occupation of the island, its further defense, and its development. The

Commander, Fifth Fleet, would then report this action to CinCPOA, who would relieve him of further responsibility. The Commanding General, US Tenth Army would then be placed directly under CinCPOA, in the role of Commander, Ryukyus Forces.⁹ While amphibious operations had become a routine matter in the Pacific Theater by this time during World War II, Operation ICEBERG was unique in that it was the first campaign where the US Navy would initially control Army and Marine forces comprising a field army.¹⁰ Although the US Navy would be responsible for Operation ICEBERG with overall command vested in CinCPOA, Admirals Nimitz and Spruance fostered a spirit of interservice cooperation by realizing that the US Army would be executing the major tasks of Operation ICEBERG once ground forces had landed in force on Okinawa and therefore should be intimately involved in the planning of the operation.¹¹

The CinCPOA's campaign plan for Operation ICEBERG facilitated lower echelon planning. Once the Joint Chiefs of Staff directive to commence planning for Operation ICEBERG was received by the CinCPOA staff, the CinCPOA's own campaign plan was prepared in less than three weeks and subsequently distributed on 25 October 1944 to the major subordinate units which would participate in the operation.¹² Among the factors which contributed to the smooth planning associated with the preparation for Operation ICEBERG was the fact that by late

1944 the US armed forces had collectively gained a great amount of experience in amphibious and joint operations and could draw upon the lessons learned from these experiences to prepare for Operation ICEBERG. More important, the planning for Operation ICEBERG benefited immensely from the fact that the joint headquarters, Pacific Ocean Areas, and all the major subordinate headquarters of the Pacific Ocean Areas were co-located on Oahu (Hawaii).¹³

The US Tenth Army's operational mission to seize Okinawa would place US armed forces within striking distance of the Japanese home islands. The mission of the Tenth Army as Expeditionary Troops, Okinawa, initially under the command of the Commander Joint Expeditionary Force (Vice Admiral Richmond K. Turner), was to assist in the capture, occupation, defense, and development of Okinawa Island and to establish control of the sea and air in the Nansei Shoto (also referred to as the Ryukyus Islands) area, with the eventual aim of extending control of the Nansei Shoto by capturing, defending, and developing additional positions within the island group. (See Appendix B for the composition of the US Tenth Army).¹⁴ A tentative operation plan was issued by the Tenth Army on 6 January 1945, with instructions that it would be placed in effect on order of Commanding General, Tenth Army.¹⁵ On 11 March 1945 all components of the Expeditionary Troops were

informed that this operation plan was now OpOrder 1-45 and was in effect. Additionally, OpOrder 1-45 specified 1 April 1945 (Love Day, L-Day) as the day of the main assault landing on Okinawa.¹⁶

The concept of the operation for capturing the Ryukyus consisted of three phases. The first phase of Operation ICEBERG specified that the seizure of the neighboring small islands off the western coast of Okinawa and capturing southern Okinawa were to be priority missions. Southern Okinawa was critical to the overall success of the operation because the area near the Tenth Army landing beaches (Hagushi) offered superb port facilities and was in close proximity to two of the principal airfields (Kadena and Yontan) which had to be captured in order for US armed forces to be capable of projecting land based air power to the Japanese mainland. Ie Shima and the remainder of Okinawa would be secured during the second phase of the operation. The positions thus gained would be used in the final phase to secure additional bases in the archipelago (See Appendix C).¹⁷

Destruction of the Japanese Thirty-Second Army and the seizure of land based airfields were the US Tenth Army's priority missions once a foothold had been gained on Okinawa. US Tenth Army OpOrder 1-45 directed US Army XXIV Corps to land with two divisions abreast on the beaches south of Hagushi; US

Army 96th Infantry Division (Major General James L. Bradley) on the right, less one regiment in corps reserve; US Army 7th Infantry Division (Major General Archibald V. Arnold) on the left with one regiment in division reserve but under the operational control of Commanding General, US Army XXIV Corps (See Appendix D). On order of the Commanding General, US Army 77th Infantry Division, one field artillery group of US Army XXIV Corps was to land on Keise Shima prior to L-Day to support the attack on Okinawa. The artillery group would revert to control of Commanding General, US Army XXIV Corps upon his arrival in the objective area. The remainder of the US Army XXIV Corps Artillery (Brigadier General Josef R. Sheetz) would land on corps order and support the corps attack with long-range interdiction, counterbattery, and harassing fires.'"

Simultaneously with the XXIV Corps' landing, the US Marine III Amphibious Corps was to land with two divisions abreast on the beaches north of Hagushi and move rapidly inland, coordinating its advance with the US Army XXIV Corps. The 1st Marine Division (Major General Pedro A. del Valle) was to assist the 6th Marine Division (Major General Lemuel C. Shepherd, Jr.) in the capture of Yontan airfield by quickly seizing the high ground northeast of Chimu; thereafter, it was to continue the attack, making the main effort on the right to maintain contact with the XXIV Corps and assist its advance.'"

The requirement to prevent enemy reinforcements from northern Okinawa from influencing the initial ground combat action in southern Okinawa heavily influenced US Tenth Army planning. Following the amphibious landing, the US Marine III Amphibious Corps was to seize an objective area on the island south of a general line across the Ishikawa Isthmus running through Chimu Wan and including the Eastern Islands. The Marine III Amphibious Corps' seizure of the designated objective area would block enemy reinforcements from northern Okinawa.²⁰ While this blocked reinforcements from the north, the XXIV Corps would secure a general east-west line through Kuba Saki to seal off the Japanese forces in southern Okinawa (See Appendix E). After the capture and occupation of central Okinawa, the Tenth Army would attack to the south and seize the remainder of the objective which would conclude Phase I of Operation ICEBERG.²¹

Phase II called for the seizure of Ie Shima and the rest of Okinawa. It was envisioned that the Motobu Peninsula would be secured by means of a combined shore-to-shore amphibious and land assault, followed by a shore-to-shore attack against Ie Shima. Capturing the remainder of northern Okinawa would firmly establish US armed forces on the island and would bring Phase II to an end. Phase III would then consolidate the gains already achieved on Okinawa and would focus on US armed forces

seizing some of the smaller islands which composed the remainder of the Ryukyus Islands.

An integral component of the US Tenth Army forces assembled for Operation ICEBERG was Tactical Air Force (TAF), US Tenth Army, commanded by Major General Francis P. Mulcahy, USMC. It was envisaged that all air support of Operation ICEBERG was to be provided by Tactical Air Force, Tenth Army which consisted of Army, Navy, and Marine Corps air units and operated under the overall control of the Commanding General, Tenth Army. Planning for the tactical air support of Operation ICEBERG focused on the need rapidly to establish airfields which would support Tenth Army ground operations on Okinawa and air interdiction missions flown to counter Japanese air efforts in close proximity to the Okinawa area. Until sufficient airfields could be established on Okinawa, Tenth Army air support would be provided from carrier based air assets assigned to the Navy and Marine Corps units of the Tactical Air Force, Tenth Army. Prior to the commencement of ground operations on Okinawa, carrier based aircraft would strike airfields on Formosa and the adjacent islands as early as L-14. Once the Tenth Army commenced ground operations on Okinawa, the priority for air support would be shifted to support these operations.

A determined Japanese field army organized an intricate

cave system which formed the defenses on Okinawa. The Japanese Thirty-Second Army (Lieutenant General Mitsuru Ushijima) had garrisoned Okinawa since the summer of 1944 in preparation for the expected invasion by US armed forces. Intelligence estimates prepared during the planning phase set the enemy's initial strength on the Okinawa Gunto at 48,600 men and credited the Japanese with the capability to reinforce this up to a total strength of 87,000 men prior to L-Day.²⁴ The major subordinate units of the Thirty-Second Army consisted of the Japanese 62d Infantry Division, the Japanese 24th Infantry Division, the Japanese 44th Independent Mixed Brigade and approximately 20,000 Okinawans (Boeitai) who were forced into service by the Japanese Thirty-Second Army (See Appendix F).²⁵ The Boeitai were instrumental in assisting the Japanese in the preparation of defensive positions on which to anchor their defense of Okinawa.

The Japanese defense of Okinawa consisted of three lines of defense in the southern portion of the island. While the nature of the terrain on Okinawa was a governing factor in how the Japanese defended Okinawa, they made innovative use of the intricate cave system they had constructed on the island. Essentially, the Japanese Thirty-Second Army established its main defense zone along a line north of Naha, Yonabaru, and Shuri (See Appendix G). Landings north of this line were to be

unopposed, while south of this zone, the invaders would be met at the beaches.¹⁴ The Thirty-Second Army positioned its main battle force in an outpost zone just north of Futema. Although this was the least likely area for the American landings, General Ushijima wanted to be prepared nonetheless. The bulk of the army's infantry and artillery force was positioned to oppose the landings over the Minatoga beaches, where General Ushijima thought the American landings would occur. Finally, the Japanese positioned the 62d Infantry Division, their only battle-tested division, to protect the vital Shuri bastion which formed the anchor for the entire Japanese defense of the island. Regardless of where the American landings occurred, Japanese forces were prepared to fight a delaying action and finally an orderly withdrawal into the hard shell of the well-organized positions formed by the Shuri bastion where a fight to the finish would occur.

SECTION III

CONDUCT OF JOINT OPERATIONS ON OKINAWA, APRIL-JUNE 1945

An essential feature of Operation ICEBERG was the pre L-Day seizure of Kerama Retto and Keise Shima by the US Army 77th Infantry Division. Preliminary naval, air and surface strikes against the entire Ryukyus Island chain commenced on 17 March 1945 and were designed to provide US armed forces control

of the sea and air in and around Okinawa prior to the main landing by the US Tenth Army.¹⁰⁰ These preliminary strikes coupled with the fact that the Japanese had left less than 1,000 defenders on Kerama Retto and Keise Shima allowed the US Army 77th Infantry Division to subdue both islands easily during a six day operation (See Appendix H). The seizure of Kerama Retto provided invading US Tenth Army forces with a naval anchorage from which logistics could be funneled into the area of operations, while Keise Shima provided the US Army XXIV Corps artillery a base from which it could support future landing operations on Okinawa.¹⁰¹

Japanese resistance was minimal against the US Tenth Army's 1 April 1945 landing on Okinawa. Contrary to American estimates, the Tenth Army landings north and south of Hagushi beach were unopposed. The four US divisions which landed abreast in the assault wave rapidly penetrated to the interior of Okinawa and seized key objectives. In fact, both Kadena and Yontan airfields were captured prior to 1300 hours on 1 April 1945 (Love Day), the first day of operation on Okinawa. The Tenth Army's success on the Hagushi beach landings was largely attributed to the feint conducted by the 2d Marine Division off the eastern coast of Okinawa which successfully immobilized any serious opposition to the main American landings on the Hagushi beach. Rapid success during the first three days of the ground

operations on Okinawa placed the Tenth Army twelve days ahead of schedule and provided General Buckner with some flexibility in the execution of future operations.

The US Marine III Amphibious Corps maintained the initiative and attacked toward northern Okinawa to seize the Motobu Peninsula. Although it was not envisaged during the initial planning that the Motobu Peninsula could be seized until Phase II of Operation ICEBERG, the current situation provided the Tenth Army with an opportunity to capture it before Phase I (the seizure of southern Okinawa) was completed. General Buckner modified the existing plan and directed General Geiger's III Amphibious Corps to commence Phase II of Operation ICEBERG by attacking toward northern Okinawa to seize the Motobu Peninsula. Rather than dispatch the entire Marine III Amphibious Corps to take care of the Japanese forces lodged in northern Okinawa, General Geiger had the 1st Marine Division continue their attack toward the east coast, down the Katchin Peninsula, and took the island of Yabuchi Shima at the tip of the peninsula by 6 April 1945 (See Appendix E).

As the 1st Marine Division was capturing the Katchin Peninsula, the 6th Marine Division conducted a two week operation (6-20 April 1945) in northern Okinawa to neutralize Japanese resistance on the Mobotu Peninsula. The mountain bastion of Yae Take formed the strength of the Japanese position on the Mobotu

Peninsula and was defended by at least 2,000 Japanese soldiers. Beginning on 14 April 1945 the 6th Marines, assisted by air, artillery and naval gunfire, proceeded to dislodge the Japanese defenders from the Yae Take bastion. By 20 April 1945, all organized resistance had ended on the Motobu Peninsula.

As the 6th Marine Division secured the Motobu Peninsula the 77th Infantry Division defeated Japanese forces on Ie Shima island. In a separate but closely related operation, the 77th Infantry Division conducted operations from 16-21 April 1945. During the Ie Shima island operation, the 77th Infantry Division seized terrain suitable for airfield development as the US armed forces stationed long-range fighter aircraft on Okinawa. The stage was now set to allow the massed power of the US Tenth Army to be concentrated against the main force of the Japanese Thirty-Second Army in southern Okinawa.

The US Army XXIV Corps' rapid advance in southern Okinawa became bogged down as the the corps encountered the Japanese Thirty-Second Army's initial defensive zone. Less than a week after the Army XXIV Corps landed and commenced its drive into southern Okinawa, the corps obtained a foretaste of how intense the remainder of the campaign would be. Beginning on 10 April 1945, the Army XXIV Corps commenced a two week sustained operation against the the enemy's initial defense zone which ran along a line from northwest to southeast from Kakazu,

Nishibaru to Tanabaru (See Appendix I).³¹

General Hodges' XXIV Corps fought to a draw against the stubborn Japanese defenders during the first four days of the operation with neither side making any substantial gains. Several Japanese counterattacks launched during 12-14 April 1945, were unable to break the deadlock which resulted from the fighting between the two opponents (See Appendix I).³²

On 19 April 1945 a renewed American attack on the Kakazu--Skyline Ridge defenses was mounted with the assistance of a devastating array of naval gunfire, artillery and air support. The air support alone consisted of more than 650 Marine and Navy planes. While this was one of the most powerful attacks the Americans had launched against the Japanese to date, the attack did nothing to reduce the tenacity of the Japanese defense. Even with the attachment of the 11th Marine Division (III Amphibious Corps' artillery), the XXIV Corps was unable to crack the stubborn Japanese initial defenses. In fact, a breakthrough did not come until 24 April 1945 after the Japanese had secretly withdrawn to their next line of defense to the south.

The sustained fighting to reduce the Kakazu--Skyline Ridge defenses demanded that the battered US divisions be replaced with fresh divisions to facilitate the Tenth Army's drive to the south. Beginning on 29 April 1945 the 77th

Infantry Division replaced the 96th Infantry Division, while on 1 May 1945 the 1st Marine Division replaced the 27th Infantry Division.

On 3 May 1945, the Japanese Thirty-Second Army launched a major counterattack against the US Tenth Army generally along an east--west line from Unaha to Awacha with the intent of pushing the American army northeast along a east--west line from Uchitomari to Minamiuebaru (See Appendix I).³³ In addition to fighting along the front lines, the Japanese attempted an amphibious landing at Kuwan in order to position enemy troops in the rear of the Tenth Army positions. The Japanese plans for a decisive victory were thwarted on 5 May 1945 by the overwhelming strength of the Tenth Army's ground and supporting arms operations. The 134 planes which flew in support of the XXIV Corps' operations on 4 May 1945 were characteristic of the combat power which US armed forces were able to mount against the Japanese and which ultimately destroyed seventy-five percent of the original strength of each Japanese division which participated in the failed Japanese counterattack.³⁴

The Tenth Army answered the Japanese counterattack with a coordinated attack of its own. As Tenth Army repelled the 3-5 May 1945 Japanese counterattack, it prepared for an attack designed to envelop the Shuri bastion and destroy the forces

which manned this enemy position. On 11 May 1945, General Buckner launched a two-corps attack against the Shuri bastion with the ultimate mission of destruction of the Japanese Thirty-Second Army (See Appendix J). In a series of intense battles which continued until the Japanese abandoned the Shuri bastion on 29 May 1945, the Tenth Army was able to synchronize its ground and air operations in order to dislodge the Japanese Thirty-Second Army from its most well prepared defensive positions on Okinawa and cause the remaining Japanese defenders to retreat hastily to prepared positions south of the Shuri bastion on the Kiyamu Peninsula.¹²

A defeated Japanese Thirty-Second Army retreated to the Kiyamu Peninsula for a final defense of Okinawa. Beginning on 3 June 1945 and continuing through the end of the Okinawa campaign on 21 June 1945, the US Tenth Army synchronized ground, amphibious, and air operations and ultimately defeated the Japanese Thirty-Second Army. On 3 June 1945, the 6th Marine Division conducted an amphibious landing on the Oroku Peninsula and defeated a 1,500-man contingent of Japanese Naval Base Forces during a fierce ten day battle. Had these enemy forces been allowed to enter the Kiyamu Peninsula battle, they might have turned the tide in favor of the Japanese defenders (See Appendix K). Additionally, General Buckner facilitated operations in the III Amphibious Corps' sector. He shifted the

boundary between the III Amphibious Corps and the XXIV Corps west on 4 June so that the III Amphibious Corps had a smaller sector which helped the corps to encounter fewer Japanese defenders as it pushed to capture Ara Saki on the southern tip of the Kiyamu Peninsula (See Appendix K).⁶⁶ The XXIV Corps neutralized the most stubborn enemy resistance on the Kiyamu Peninsula--the reduction of the Yazu Dake-Yaeju Dake outpost line. Although the official end of the Okinawa campaign did not occur until 22 June 1945, the Tenth Army had crushed the most substantial Japanese resistance by 18 June 1945. In the XXIV Corps zone, American air, naval gunfire and artillery were synchronized as the 96th Infantry Division attacked the Medeira Escarpment from the east while the 1st Marine Division attacked the same objective from the west; simultaneously, the 7th Infantry Division conducted a two-pronged attack which ultimately captured Komesu and Mabuni the Japanese Thirty-Second Army headquarters.⁶⁷ The Tenth Army had defeated the Japanese Thirty-Second Army in one of the fiercest campaigns of World War II.

SECTION IV

EFFECTIVE COMMAND AND CONTROL PRINCIPLES FOR US ARMY AND US MARINE CORPS OPERATIONS DERIVED FROM THE OKINAWA CAMPAIGN

An analysis of the US Tenth Army's Okinawa campaign has

provided a wealth of information concerning the command and control principles which have been most applicable for Army and Marine Corps forces configured for field army operations. In order to establish some meaningful parameters for deciding which command and control principles would be of most value for future field army operations where Army and Marine Corps forces are involved, one must examine the current US Army operational doctrine.

US Army Field Manual 100-5, Operations, (Final Draft, dated 28 October 1985) emphatically states that joint operations involving Army and Marine Corps forces must be viewed as the rule which will guide future military operations as US armed forces are deployed throughout the world in order to respond to various conflicts in the future. Field Manual 100-5 provides guidelines for effective command and control based on the fact that successful execution of operational art depends upon having a command and control system that can function faster and more effectively than the enemy's. These guidelines are equally effective in large unit joint operations.

Based on the premise stated above, Field Manual 100-5 outlines several principles which are instrumental to the establishment of an effective command and control system. Three of these command and control principles are clearly

consistent with the most important command and control lessons derived from Army and Marine corps operations within the US Tenth Army during the Okinawa Campaign of 1945. These three principles are: flexibility of the campaign plan; the ability of the command and control system to capitalize on success; and the capability for friendly forces to function faster and more effectively than the enemy forces.³⁶

FLEXIBILITY OF THE CAMPAIGN PLAN

The US Marine III Amphibious Corps' initial employment in northern Okinawa was a modification of the original US Tenth Army campaign plan. Although the original US Tenth Army campaign plan had not envisioned Phase II of Operation ICEBERG commencing until well after L-Day, General Buckner modified the campaign plan shortly after the initial L-Day landings and commenced Phase II of Operation ICEBERG before Phase I of Operation ICEBERG had been completed. The early commencement of Phase II of Operation ICEBERG, the seizure of northern Okinawa and Ie Shima, was made possible by the rapid progress the III Amphibious Corps made from L-Day to L+2 based on the fact that the Japanese Thirty-Second Army did not oppose the Tenth Army landings on L-Day. General Buckner took advantage of the time gained as a result of the unopposed landings. The time gained contributed to the overwhelming ground combat power

the Tenth Army massed against the initial Japanese defense zone during late April 1945.

Operational maneuver and air support in northern Okinawa and Ie Shima had to be delicately synchronized with the operations in southern Okinawa. It was essential that the operations in northern Okinawa and Ie Shima be successful without jeopardizing the on-going operations of the XXIV Corps in southern Okinawa. The 6th Marines' provided a superb example of operational art with its fifty five mile movement to the Motobu Peninsula combined with the carrier base air support which subsequently destroyed a sizeable Japanese force in the vicinity of Yae-Take. Additionally, the synchronization of the 6th Marine Division's operations with those conducted by the 77th Infantry Division on Ie Shima conclusively demonstrated how tactical battles must be linked to each other for the attainment of operational success.

The flexibility of the campaign plan facilitated the employment of the 6th Marine Division and the 77th Infantry Division in economy of force roles as they destroyed enemy forces which could have reinforced Japanese forces in southern Okinawa and subsequently affected Tenth Army future operations. The shifting of the III Amphibious Corps' artillery division (11th Marine Division) to southern Okinawa constituted a logical response to increased enemy resistance faced by the

XXIV Corps. An additional example of the flexibility of the Tenth Army's Okinawa campaign plan was demonstrated when the 11th Marine Division was attached to the XXIV Corps in order to provide the corps with additional fire support during its 12-14 April 1945 attack on the enemy's Kakazu--Skyline Ridge defenses. The added firepower created by the attachment of the 11th Marine Division to the XXIV Corps created the necessary conditions which ultimately caused the Japanese Thirty-Second Army to withdraw from the security of its Kakazu--Skyline Ridge defenses. More important, the attachment of III Amphibious Corps' division artillery to the XXIV Corps was indicative of the type of interservice cooperation which characterized the entire Okinawa campaign.

ABILITY OF THE COMMAND AND CONTROL SYSTEM TO CAPITALIZE ON SUCCESS

The unopposed US Tenth Army amphibious landing on L-Day and the Tenth Army's subsequent progress to the east on Okinawa was unexpected. Although the Tenth Army expected a fierce fight with the Japanese Thirty-Second Army upon landing on the Hagushi beaches on L-Day, this fight did not occur. Instead, the Japanese defenders on Okinawa chose to fight the US invaders from well-fortified defensive positions within the interior of Okinawa rather than risk possible defeat in detail

by fighting the Tenth Army on the beaches as they came ashore. The added time gained by the Tenth Army, based on the fact that the L-Day landings were unopposed, allowed the field army rapidly to capture the Yontan and Naha airfields within hours of landing troops on Okinawa.

The immediate capture of land-based airfields provided the Tenth Army with an immense amount of flexibility in providing air support for ground operations and allowed US air operations to be conducted as far away as the Japanese mainland. The increased range of US air operations was crucial in order to interdict Japanese Kamikaze planes which attempted to destroy US Navy aircraft carriers and ships operating off the coast of Okinawa. Most important, the XXIV Corps used the additional time gained by the unopposed amphibious landings on L-Day to concentrate forces in southern Okinawa in preparation for the corps attack on the Japanese initial defensive positions.

Early success in northern Okinawa by the 6th Marine Division facilitated the III Amphibious Corps being employed in southern Okinawa during late April 1945. The 6th Marine Division neutralized possible enemy forces which could have influenced operations in southern Okinawa. These battles materially added to the combat power the Tenth Army ultimately used against the Japanese Thirty-Second Army beginning in late April 1945. The Tenth Army was limited in the types of

operations it conducted against the Japanese Thirty-Second Army during the first twenty-five days on Okinawa. This was because the XXIV Corps conducted operations in southern Okinawa while the III Amphibious Corps simultaneously conducted operations in northern Okinawa.

The Commanding General, Tenth Army had a wider range of options for operations once both corps were employed in southern Okinawa against a weakened Japanese Army. This fact was illustrated by the clever employment of all available US forces during the final defeat of Japanese forces trapped on the Kiyamu Peninsula. The devastating US air support and the overwhelming power of an attacking US field army pushed the battered Japanese force into the East China Sea.

Finally, the imminent threat of a US amphibious landing off the coast of Minatoga impaired initial Japanese defense efforts. During the early days of the Okinawa campaign, the Tenth Army successfully feigned a division sized amphibious landing off the coast of Minatoga on the southeastern coast of Okinawa. The 2d Marine Division's feints effectively immobilized Japanese reinforcements which could have been used to blunt the initial US attacks on the outer Japanese defensive positions. Instead, the Japanese forces in the Minatoga area remained vigilant and anticipated a US amphibious landing which never occurred.

FRIENDLY FORCES FUNCTIONING FASTER AND MORE EFFECTIVELY
THAN ENEMY FORCES

The Tenth Army sustained its attack toward southern Okinawa by keeping fresh units in the front lines. Battered divisions were replaced by fresh divisions in order to maintain the momentum of the Tenth Army's early May 1945 attack. Furthermore, the replacement process was enhanced by the fact that General Buckner replaced the various divisions without regard to whether they were Army divisions or Marine divisions. For example, beginning on 29 April 1945, the 77th Infantry Division replaced the 96th Infantry Division while on 1 May 1945 the 1st Marine Division replaced the 27th Infantry Division.

Attempts by the Japanese Thirty-Second Army during their 3-5 May 1945 counterattack to strike a decisive blow on the flanks of the XXIV Corps were foiled. The 1st Marine Division rapidly repelled the enemy's amphibious landings at Kuwan. With the defeat of the Japanese counterlanding attempts on both the east and west coasts of Okinawa, the flanks of the XXIV Corps were secure, and the Japanese Thirty-Second Army's attempt to seize the initiative from the Tenth Army had ended in failure.

THE SYNCHRONIZATION OF AIR SUPPORT AND OPERATIONAL MANEUVER

Air support of operational maneuver extended beyond close air support of ground operations during the Okinawa campaign. While close air support operations were instrumental in the sustained ground operations conducted during the Okinawa campaign, the air interdiction campaign contributed equally to the overall success of the operation. The Tactical Air Force, Tenth Army constantly supported all Tenth Army operations throughout the entire Okinawa campaign. From the pre L-Day missions flown to soften up Kerama Retto and Keise Shima to the interdiction and bombing missions flown against the Japanese homeland, air support played a critical role in the Okinawa campaign.

Perhaps the greatest impact the Tactical Air Force had on the Okinawa campaign was the destruction and interdiction attacks against staging fields in the northern Ryukyus Islands and against Kamikaze air bases on Japan's southern island of Kyushu. These air attacks substantially disrupted the enemy's ability to affect Tenth Army ground operations on Okinawa. Although operational control of all aircraft during the Okinawa campaign remained under the US Navy, a smooth functioning air support system was established to support ground operations and interdiction efforts.

The spirit of interservice cooperation which existed among

the US armed forces was illustrated by the fact that Marine air squadrons of the Tactical Air Force based on Okinawa fields flew combat air patrols, while close air support was routinely provided by carrier-based aircraft.⁴³ Nevertheless, US Marine Landing Force Air Control Support Units, which landed shortly after the Tactical Air Force went ashore on Okinawa, coordinated and monitored all Tenth Army request for close air support missions. Front line control of the ground missions flown both by land-and carrier-based aircraft was provided by the Air Liaison Parties from Joint Assault Signal Companies attached to each infantry division.⁴⁴

SECTION V

CONCLUSIONS

The US Tenth Army's Okinawa campaign serves as a model for today's students of operational art concerning the conduct of field army operations involving major Army and Marine Corps units. The Tenth Army's efforts throughout the Okinawa campaign remained focused on what the Commanding General, Tenth Army considered to be the enemy's center of gravity--the destruction of the Japanese Thirty-Second Army. The Tenth Army placed its full combat power against the Japanese Thirty-Second Army by skillfully sequencing battles and engagements.

The flexibility of the Tenth Army's Tactical Air Force

contributed to the overall success of the Okinawa campaign. As mentioned earlier in this study, it played a key role in the Okinawa campaign through its provision of effective and timely air support. While the Tactical Air Force excelled in providing close air support for ground operations on Okinawa, it also played a crucial role in the ultimate success of the Okinawa campaign through the conduct of a successful air interdiction campaign which denied the Japanese Air Force an effective role against Tenth Army ground forces."

Gaining air supremacy was a priority mission for the Tactical Air Force. Air supremacy was considered to be the vital ingredient which linked air-ground operations. While the initial air missions flown during the first days of the Okinawa campaign were flown exclusively in support of ground operations, senior ground and air commanders immediately switched the focus of the air missions to air interdiction as Japanese fighter planes conducted Kamikaze attacks against the the Tactical Air Forces' air capability. Once the Tactical Air Forces' priority shifted to air interdiction, Japanese air efforts were minimal against US ground operations on Okinawa.

Experience in previous joint operations allowed the two corps assigned to the Tenth Army to focus on interservice cooperation rather than interservice competition. One of the greatest advantages which the joint planners had as they

prepared the plans for the Okinawa campaign was that there was a shared understanding of the benefits associated with joint operations by this time in World War II. For example, while the Army forces had their own air support, the capability was limited since land based air facilities were needed for all Army Air Force units. This situation was in sharp contrast to the responsive air support which Marine Corps forces had based on the fact that their air support was flown from aircraft carriers in conjunction with Navy aircraft. Additionally, the joint service cooperation which existed between the Army and Marine Corps forces which fought side by side during the Okinawa campaign facilitated operational planning. As mentioned earlier in this study, Army units were routinely replaced in the front line by Marine Corps units for various missions without any loss in operational efficiency.

The ability of Army and Marine Corps forces successfully to conduct joint operations during the Okinawa campaign has continued to serve as a model for how joint operations involving Army and Marine Corps forces should be conducted. From the perspective of operational art, the Okinawa campaign provides valuable insights concerning the synchronization of operational maneuver and air operations.

One of the most significant aspects of the Okinawa campaign was that air operations, close support and air

interdiction were viewed as an integral part of all ground operations. Senior US commanders fully recognized the linkage between air superiority and successful ground operations. For example, when the total number of air support missions to be flown were reduced, the number of close support missions were cut while the number of air interdiction missions to be flown remained constant. The interdiction missions ultimately reduced potential Japanese air attacks which could have hampered US armed forces ground operations on Okinawa. Furthermore, the flexibility of the available air assets contributed to the overall effectiveness of the synchronization of operational maneuver and air operations.

Even though land based aircraft missions were not flown until 12 April 1945, carrier-based aircraft supported the modified ground campaign plan. This allowed the 6th Marine Division to defeat the Japanese force in northern Okinawa earlier than had been anticipated in the original plan. The battles won in northern Okinawa allowed the Tenth Army to concentrate the full force of its combat power against the Japanese forces which defended southern Okinawa.

Since World War II, changes in technology, doctrine and the willingness of the US armed forces to cooperate with one another in the accomplishment of the mission have diminished the capabilities of Army and Marine Corps forces to conduct

major operations within a single field army. The interservice cooperation which characterized joint operations in the Pacific Theater during World War II has been supplanted by interservice rivalries which have been so intense over the past decade that they have threatened and at times have adversely affected the capability of the US armed forces to conduct effective joint operations.

Although the US armed forces have made quantum leaps in technological advances in all areas since World War II, each service has done so without regard to the interfaces required to execute large unit joint operations.⁴⁰ Some of the most pervasive technological advances being proposed today are in command and control. For example while the Army's Maneuver Control System and the Marine Corps' Tactical Command and Control System (MTACCS) are technological advances which seek to improve command and control of units during combat operations, it is questionable whether the systems can interface with each other. The difficulty of Army and Marine units communicating with each other during Operation URGENT FURY suggests that joint command and control should continue to be a top priority for both services. On-going developments such as the Joint Integrated Air Command and Control Systems (JINTACCS) and J-FIRE are steps in the right direction in an attempt to reduce the problems associated with joint command

and control. Nevertheless, the technological difficulties of joint command and control will not be overcome until the Army and Marine Corps insist that future command and control systems must interface with the other services' systems.

Service rivalries rather than service cooperation have frequently characterized the most recent joint operations. The routine execution of joint operations conducted by the US armed forces in the Pacific Theater during World War II has been supplanted by service rivalries today. This type of service rivalry was recently demonstrated during the Grenada operation; Army forces operated on one half of the island and Marine forces operated on the remaining half of the island.

Doctrine for joint field army operations has been dormant since the Korean War. As mentioned previously, Army and Marine Corps forces routinely conducted joint operations in the Pacific Theater during World War II. The trend of joint operations continued during the Korean War where Marine regiments and divisions fought under the US Eighth Army and the US X Corps, both commanded by Army generals. During the Vietnam War, there was a reduced need for Army and Marine Corps forces to conduct large unit joint operations and this proficiency was diminished.

The US Army's AirLand Battle doctrine, initially published in 1982, revived interest in the operational level of war and

the importance of large unit joint operations. An additional catalyst which focused attention on large unit joint operations was the creation of the Rapid Deployment Joint Task Force (RDJTF) in 1982. Finally, the 1983 Grenada operation heightened civilian and military interest in the ability of the US armed forces to conduct joint operations at all levels. Nevertheless, there remains a void in doctrinal material which prescribes how Army and Marine Corps forces are expected to conduct field army operations. Other than a cursory mention of field army operations in the US Army's Field Manual 100-5, Operations, (Final Draft, dated 28 October 1985), the most detailed treatment of the subject can be found in US Army Combined Arms Combat Developments Activity (CACDA) Field Circular 100-16-1, Theater Army, Army Group, and Field Army Operations (dated 18 December 1984).

The immediate challenge for today is for US Army and US Marine service schools to work together and develop a joint doctrine for large unit joint operations. The development of joint doctrine between Army and Marine Corps forces for amphibious operations provides a model for interservice cooperation. Furthermore, joint field training exercises at Fort Irwin, California and Twenty Nine Palms, California which would feature a corps composed of Army and Marine Corps units versus a similar corps could assist the development of a viable

doctrine for large unit joint operations. Finally, the US Army and US Marine Corps should work together to establish a joint study group on field army operations, similiar to the study group which was the forerunner of the recently established joint Low Intensity Conflict Center, to examine how the US armed forces can regain the joint operations proficiency in large unit ground operations they attained during World War II. The reality of the increased joint nature of future conflicts demands that the Army and the Marine Corps be aggressive in developing the proficiencies required for field army operations which involve Army and Marine Corps forces; action and not rhetoric is the only way the US armed forces can improve in the execution of large unit joint operations. Waiting until we are in the next conflict to perfect our joint large unit ground operations doctrine is taking too much of a risk.

ENDNOTES

1. The situation mentioned in this study occurred in December 1985 during a School of Advanced Military Studies' (SAMS) wargame. The 1985-6 SAMS Southwest Asia exercise conducted by the School of Advanced Military Studies at Fort Leavenworth, Kansas portrayed a notional unified command (the US Indian Ocean Command [INDCOM]) conducting operations in Southwest Asia. The Commanding General, US 9th Army was the Army component commander and commanded two US Army corps. The MAF was deployed adjacent to the 9th Army but was never directed by the Joint Chiefs of Staff to become a subordinate unit of the 9th Army. It can be argued that overall command and control for this operation would have been simplified if the MAF had become subordinate to the 9th Army. This would have created a single land component commander rather than having two service component commanders (an Army component commander and a Marine component commander).
2. US Department of the Army, Field Manual 100-5, Operations, (Final Draft), (Ft. Leavenworth, KS: US Army Command and General Staff College, 28 October 1985), p. 2-11.
3. This definition was collectively developed by SAMS Seminar 4 officers at the beginning of AY 1985-86 for the purpose of developing a common "cultural bias" concerning the definition of the operational level of war.
4. Field Manual 100-5, (Final Draft), Operations, p. 2-30.
5. US Department of the Army, Field Manual 100-5, Operations, (Draft), (Ft. Leavenworth, KS: US Army Command and General Staff College, 27 June 1985), p. 2-21.
6. Synchronization is defined as the arrangement of battlefield activities in time, space and purpose to produce maximum relative combat power at the decisive point. Activities are synchronized if their combined consequences are felt at the decisive time and place (Field Manual 100-5, Operations, (Final Draft), 28 October 1985, p. 2-20.
7. Benis M. Frank, Okinawa: Capstone to Victory (New York: Ballantine Books, Inc., 1969), p. 8.
8. Ibid.

9. US Army Command and General Staff School Second Command Class, "Report on Operation ICEBERG," Ft. Leavenworth, KS., 17 May 1946, p. A2. This report was obtained from the US Army Command and General Staff College Combined Arms Research Library (CARL)(Document# N 13588).

10. Ibid., p. A1.

11. Ibid., p. C1.

12. Ibid., p. A3.

13. Ibid., p. A3.

14. Headquarters United States Army Forces Pacific Ocean Areas, "Observer's Report on the Okinawa Operation," unknown, 15 June 1945, p. 1. This report was prepared by LTC William Trabue during his assignment as an observer with the US Tenth Army. LTC Trabue worked as an assistant ACoS, G2 while with the US Tenth Army. His report covered the time frame from 8 February-2 June 1945. This report was obtained from the US Army Command and General Staff College Combined Arms Research Library (CARL)(Document# R 13237).

15. Charles S. Nichols, Jr. (Major,USMC) and Henry I. Shaw, Jr., Okinawa: Victory in the Pacific (Washington, DC.: Headquarters, US Marine Corps, 1955), p. 25.

16. US Tenth Army, "Tenth Army Action Report Ryukyu, 26 March 1945 to 30 June 1945," unknown, 3 September 1945, p. 3-0-17. This report was obtained from the US Army Command and General Staff College Combined Arms Research Library (CARL) (Document# N 11432-A).

17. Nichols and Shaw, p. 23.

18. Ibid., p. 25.

19. Ibid., p. 26.

20. Ibid.

21. Ibid.

22. Ibid.

23. US Army CGSS Second Command Class, "Report on Operation ICEBERG," p. C4.

24. Nichols and Shaw, p. 21.
25. Ibid., p. 49.
26. Frank, p. 21.
27. US Tenth Army, "Report of Operations in the Ryukyus Campaign (26 March-30 June 1945)," p. 7-I-1
28. Frank, p. 46.
29. Ibid., p. 70.
30. Ibid., p. 73.
31. Ibid., p. 89. SKYLINE RIDGE is not specifically shown on the map at Appendix I. This terrain feature generally follows the east--west line of the US Tenth Army position for the evening of 24 April (south of ISHIN and north of YONABARU).
32. Ibid.
33. Ibid.
34. Ibid., p. 104.
35. Ibid., p. 136.
36. Ibid., p. 150.
37. Ibid., p. 153.
38. Field Manual 100-5, Operations, (Final Draft), 28 October 1985, provides a detailed discussion of the command and control principles used in this study on the following pages: p.2-27, flexibility of the plan; p. 2-29, the ability of the friendly force to capitalize on success; and p. 2-30, the ability of the friendly force to function faster than the enemy forces.
39. Frank, p. 84.
40. Ibid.
41. During the Okinawa Campaign, "air interdiction" was considered to be all air missions flown to annihilate enemy aircraft in the air and on the ground, and to destroy enemy air installations (Frank and Shaw, Victory and Occupation, p.69).

There was never any serious question of US air superiority from the beginning of the Okinawa campaign, which accounted for the staggering number of Japanese aircraft destroyed during the fighting on the island. The only real Japanese threat was the effectiveness of their suicide attacks against US naval vessels. US combat air patrols were instrumental in countering the Japanese air attacks on US ships near Okinawa. While Japanese air attacks inflicted heavy losses on US ships during the Okinawa campaign, US ground combat losses from Japanese air attacks were negligible as were US air combat losses ("US Tenth Army Report of Operations in the Ryukyus Campaign, 3 September 1945, p. 11-VII-5).

42. Personal notes (13 March 1986) taken during a presentation by Major General Ray Franklin, USMC, (Deputy Chief of Staff, Research Development and Systems, Headquarters, US Marine Corps) to officers at the US Army Command General Staff College, Fort Leavenworth, KS.

ORGANIZATION OF FIFTH FLEET FOR ICEBERG

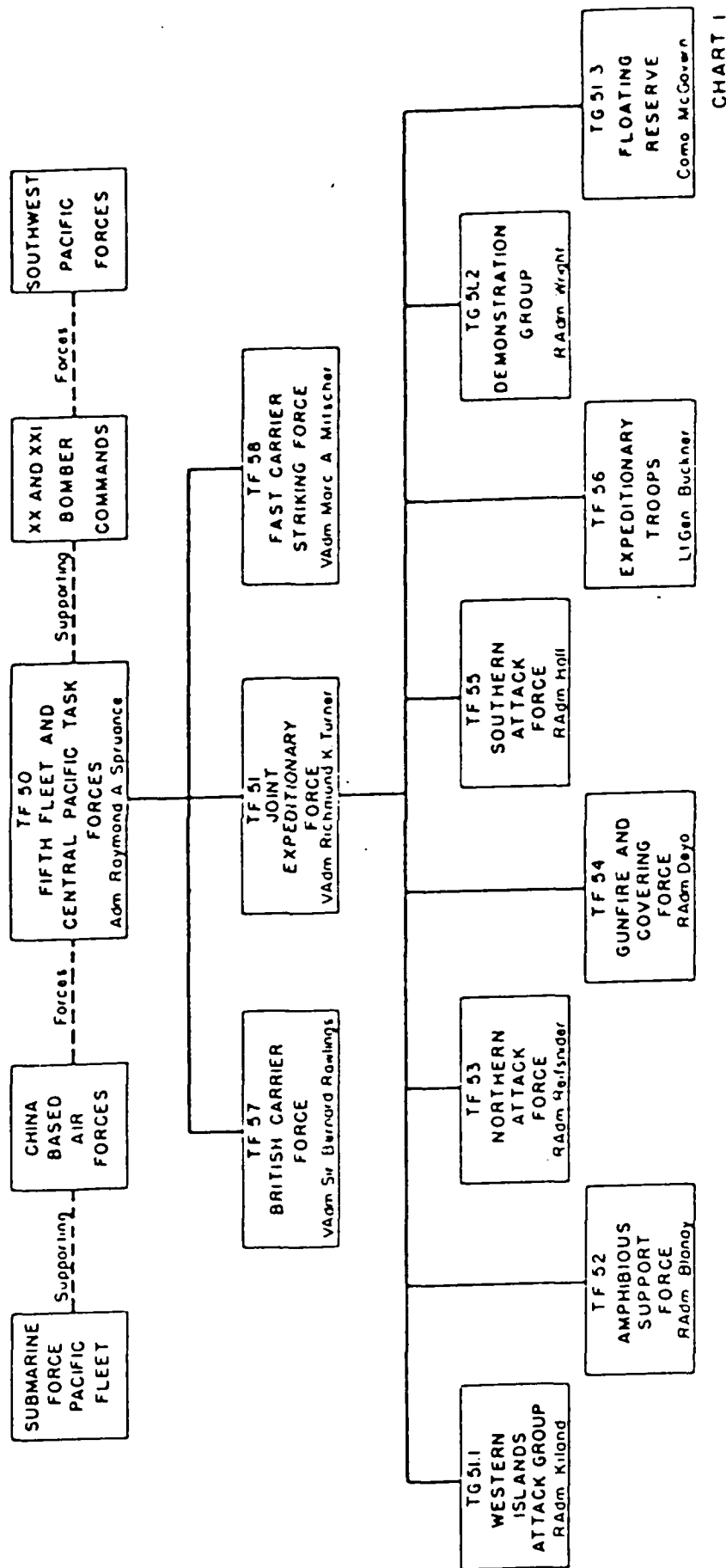
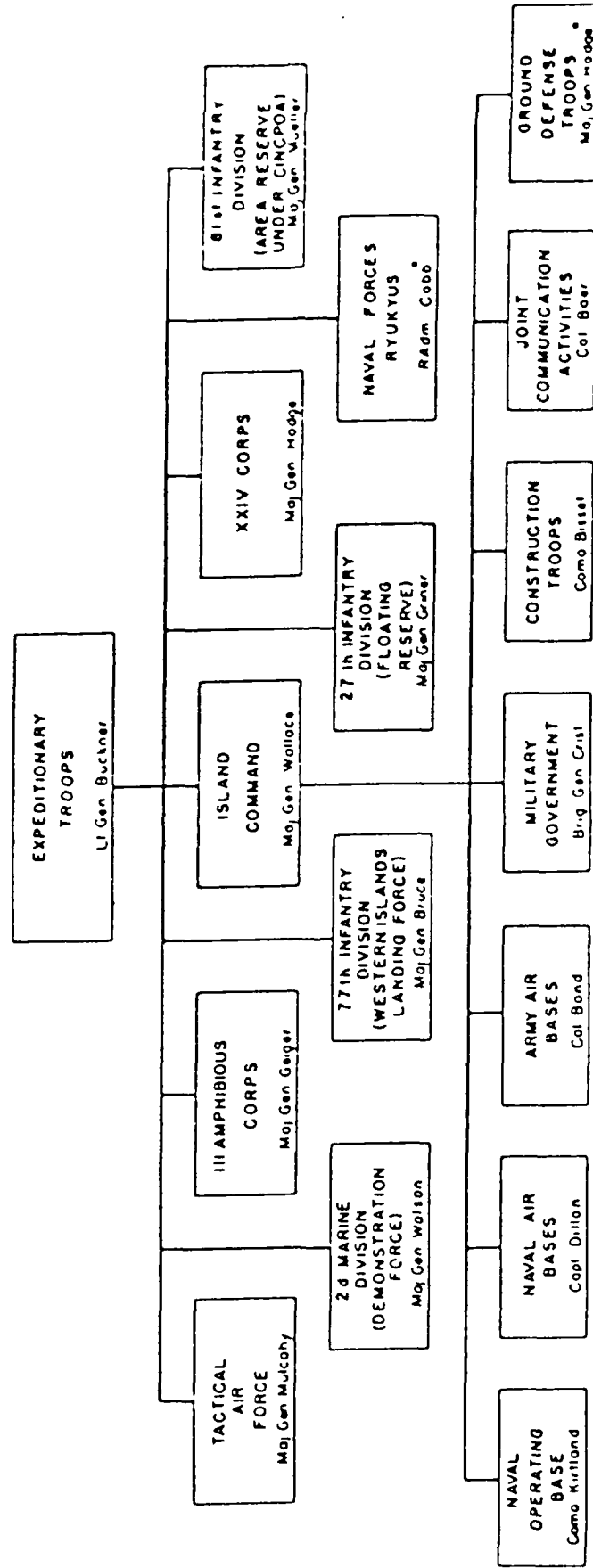


CHART 1

APPENDIX A SOURCE: Nichols and Shaw, Okinawa: Victory in the Pacific, p.16.

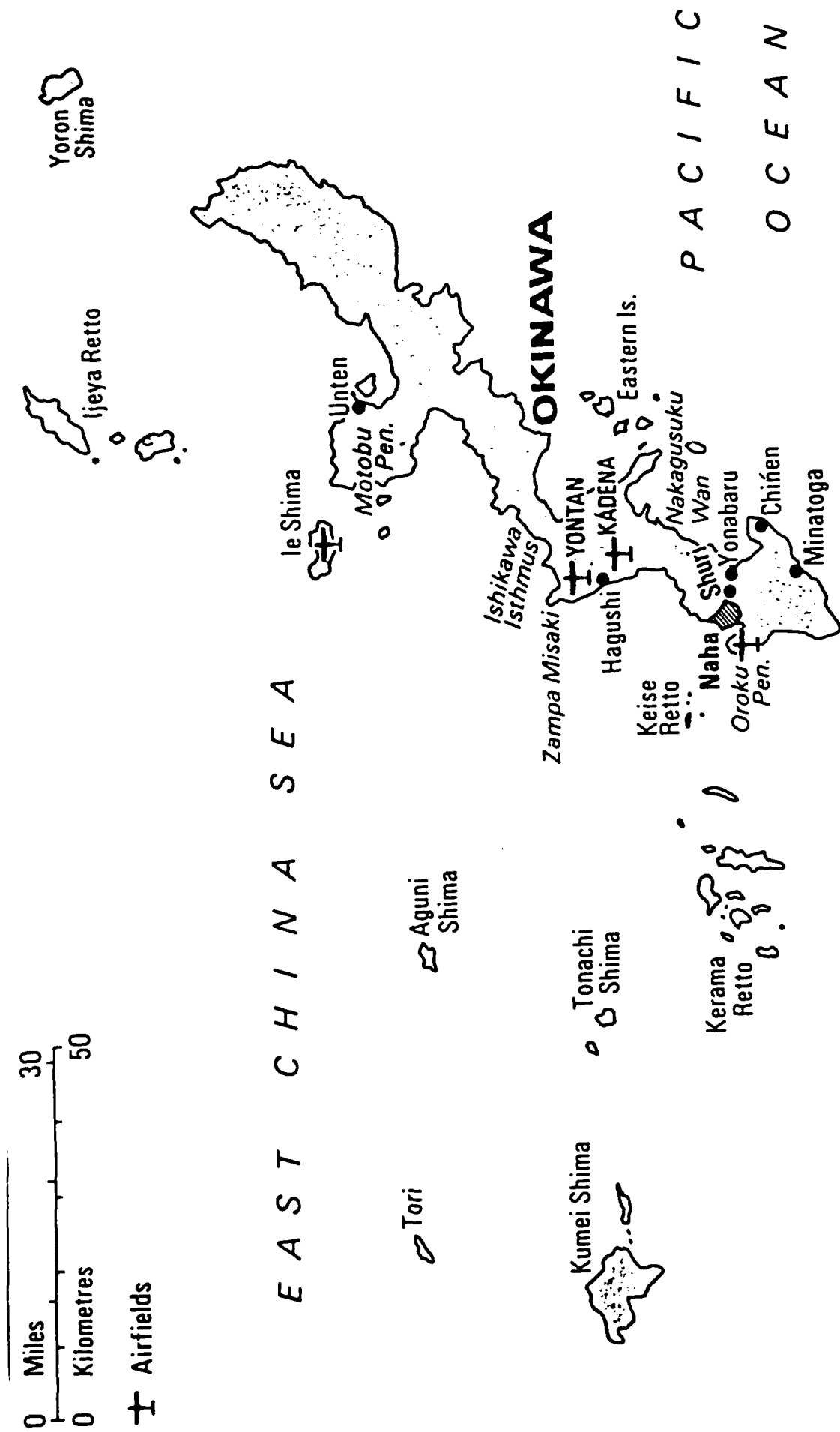
COMMAND STRUCTURE OF EXPEDITIONARY TROOPS FOR ICEBERG



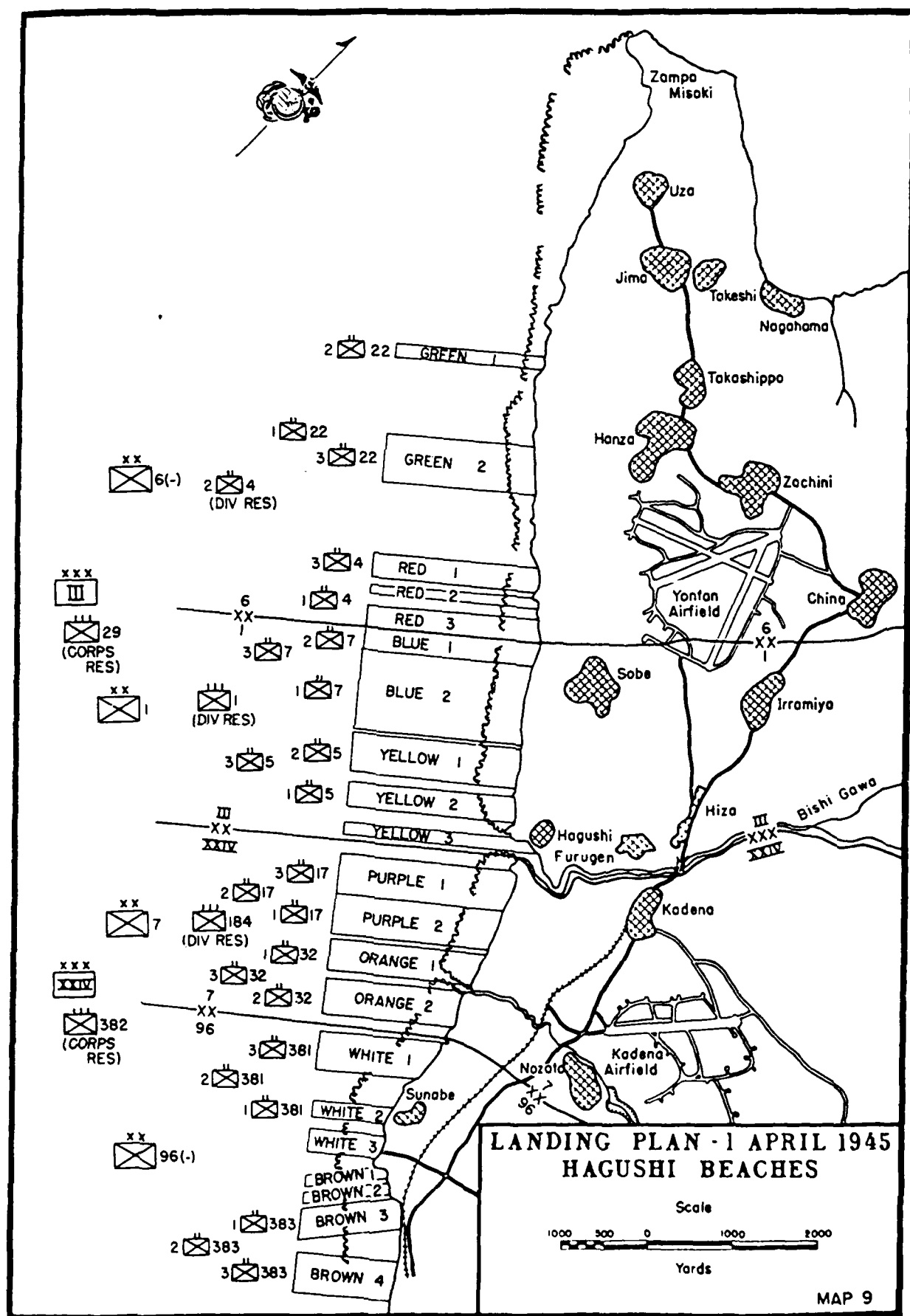
* To assume command on completion of the amphibious phase of the operation.

CHART 2

APPENDIX B SOURCE: Nichols and Shaw, Okinawa: Victory in the Pacific, p.19.



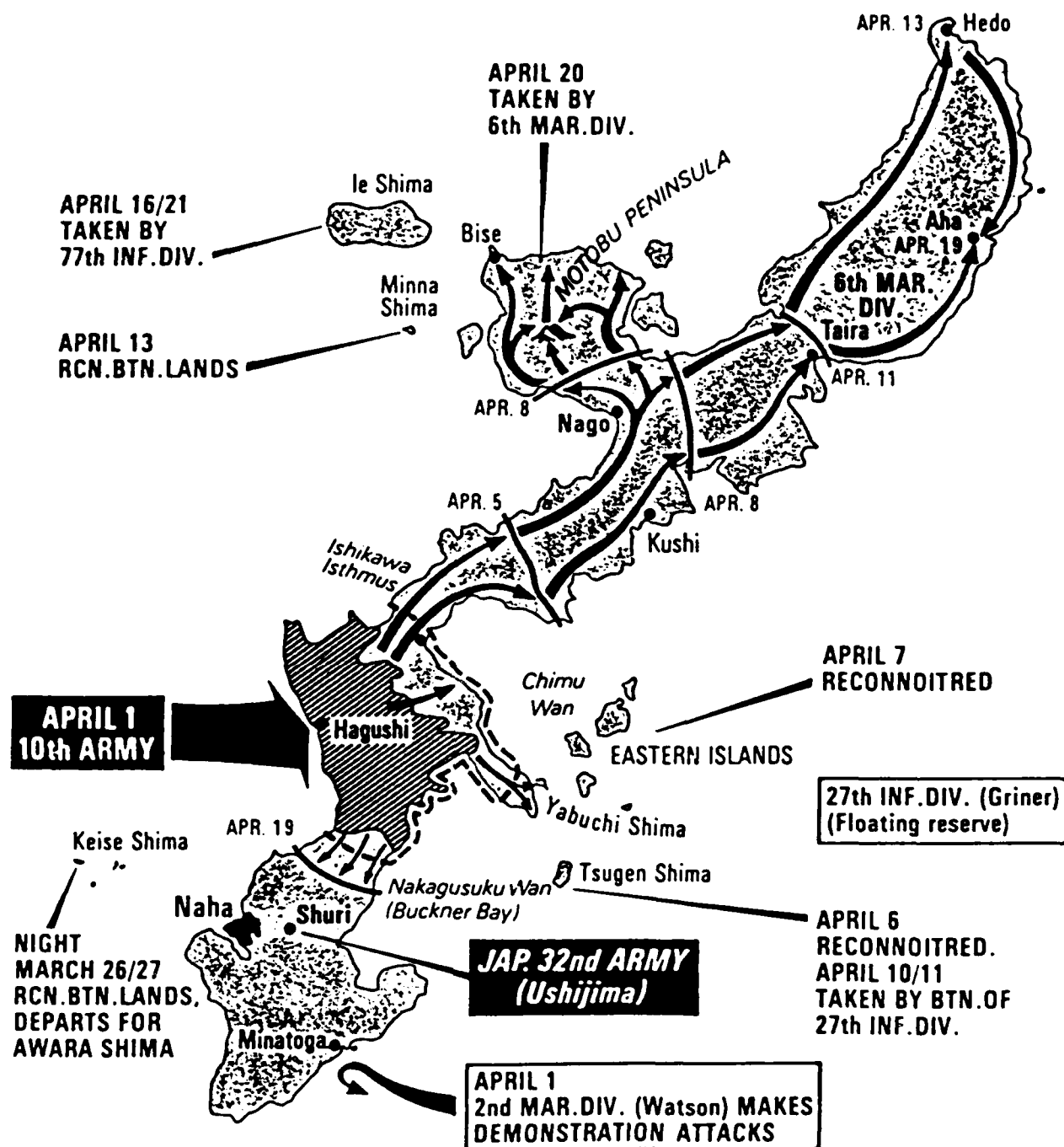
APPENDIX C SOURCE: Frank, Okinawa: Capstone to Victory, p. 18.



APPENDIX D SOURCE: Nichols and Shaw, Okinawa: Victory in the

Pacific, p. 65

(Page 48)



Territory occupied by 10th Army on April 3.

Territory scheduled to be occupied by April 16 in 'Iceberg' plans.

Front lines at dates shown

0 Miles 4 8
0 Kilometres 8 12

APPENDIX E SOURCE: Frank, *Okinawa: Capstone to Victory*, p.72.

Appendix 37

American and Japanese Forces Employed in Okinawa Campaign

United States

Tenth Army:

Lieutenant General S. Buckner, USA

Army Troops:

20th Armor Group
713th Armored Flame Thrower
Battalion

XXIV Corps:

Major General J. Hodge, USA

7th Infantry Division (+)
27th Infantry Division (+)
77th Infantry Division (+)
96th Infantry Division (+)
Corps Artillery

III Amphibious Corps:

Major General R. Geiger, USMC

1st Marine Division (+)
6th Marine Division (+)
8th Marine Regiment, 2nd Marine Division (+)
Corps Artillery

Practical Air Force:

Major General E. Mulcahy, USMC

Japan

Thirty-Second Army:

Lieutenant General M. Ushijima, IJA

Infantry Units: (38,310)

24th Division
62nd Division
4th Independent Mixed Brigade
1st-3rd Independent Battalions
26th-29th Independent Battalions
Miscellaneous Special Units

Armor, Artillery, and Automatic Weapons Units: (11,476)

27th Tank Regiment
5th Artillery Command
Other Units

Shipping and Engineer Units: (4,465)

Air Force Ground Units: (6,936)

Line of Communications Troops: (7,333)

Naval Units: (3,500)

Miscellaneous Units: (3,350)

APPENDIX F SOURCE: Bradley, The West Point Military Series
The Second World War, p. 313.

313

American and Japanese Forces Employed in Okinawa Campaign

Okinawa Home Guard (*Bochtai*): (20,000)

Marine Air Wing 2

VII Bomber Command, USAAF

301st Fighter Wing, USAAF

COMPARATIVE STRENGTH, APRIL 1, 1945

United States Forces:

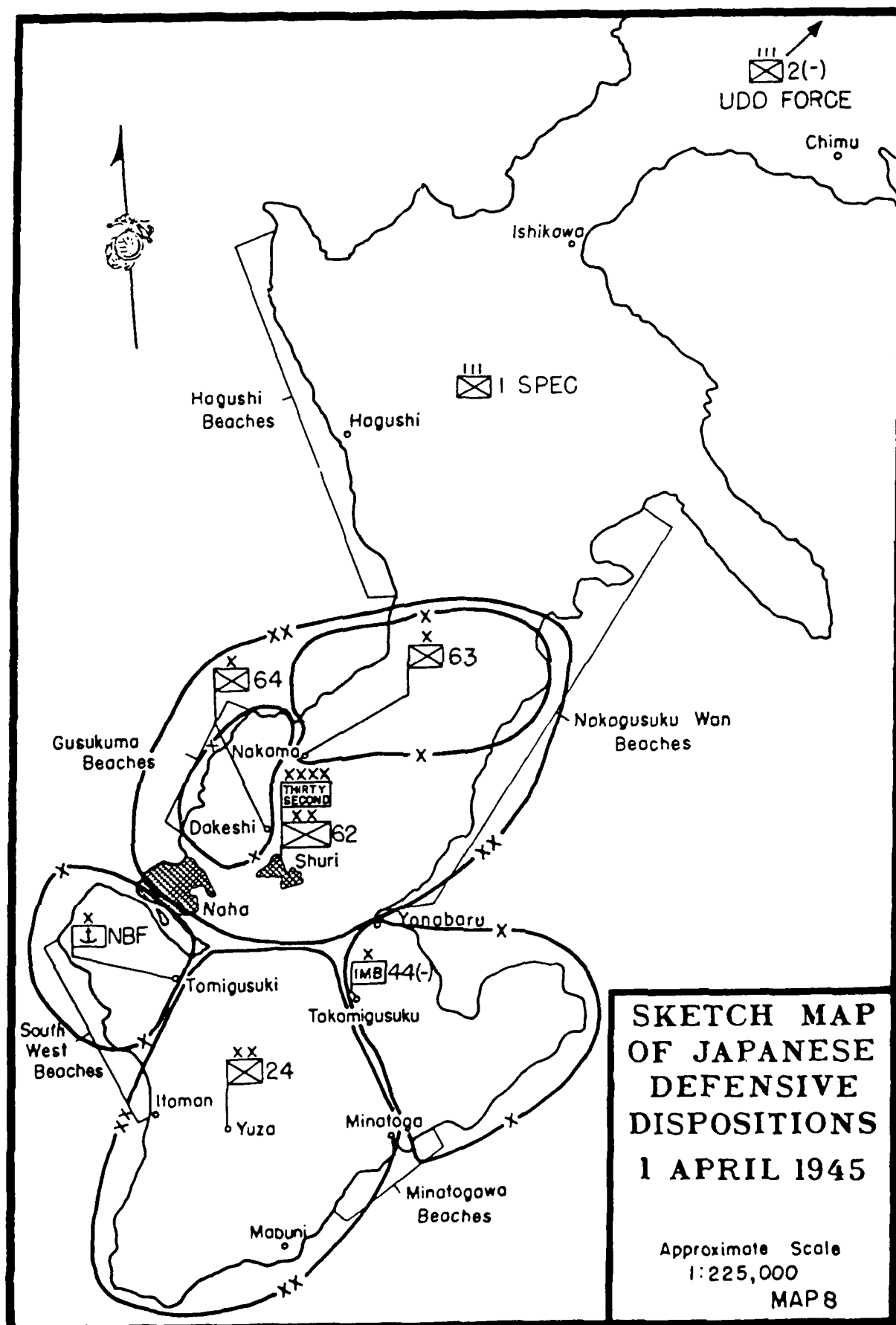
182,821

Japanese Forces:

97,000 (approx.)

(including *Bochtai*)

APPENDIX F (PAGE 2 of 2)

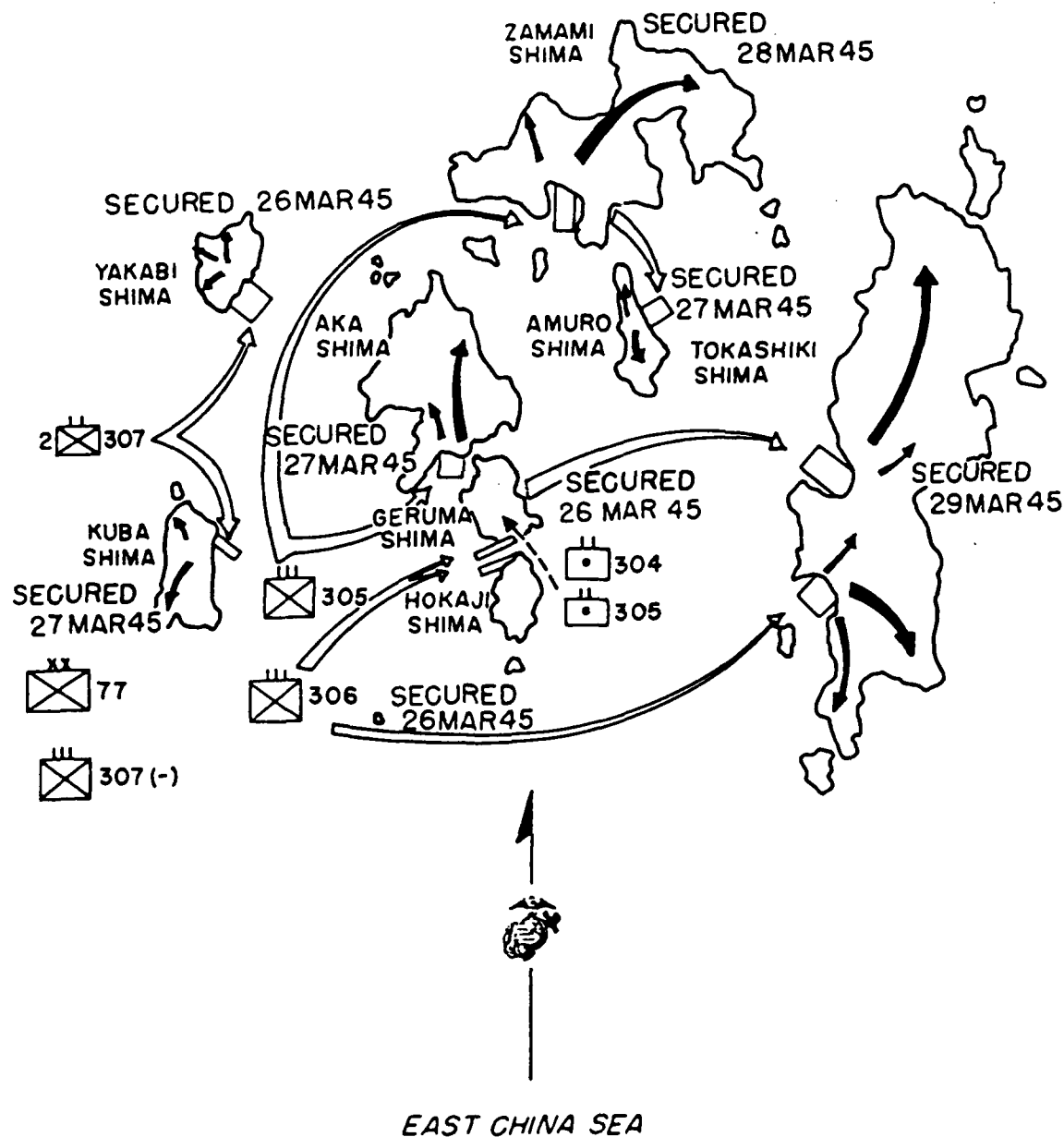


APPENDIX G SOURCE: Nichols and Shaw, Okinawa: Victory in the Pacific, p. 61.

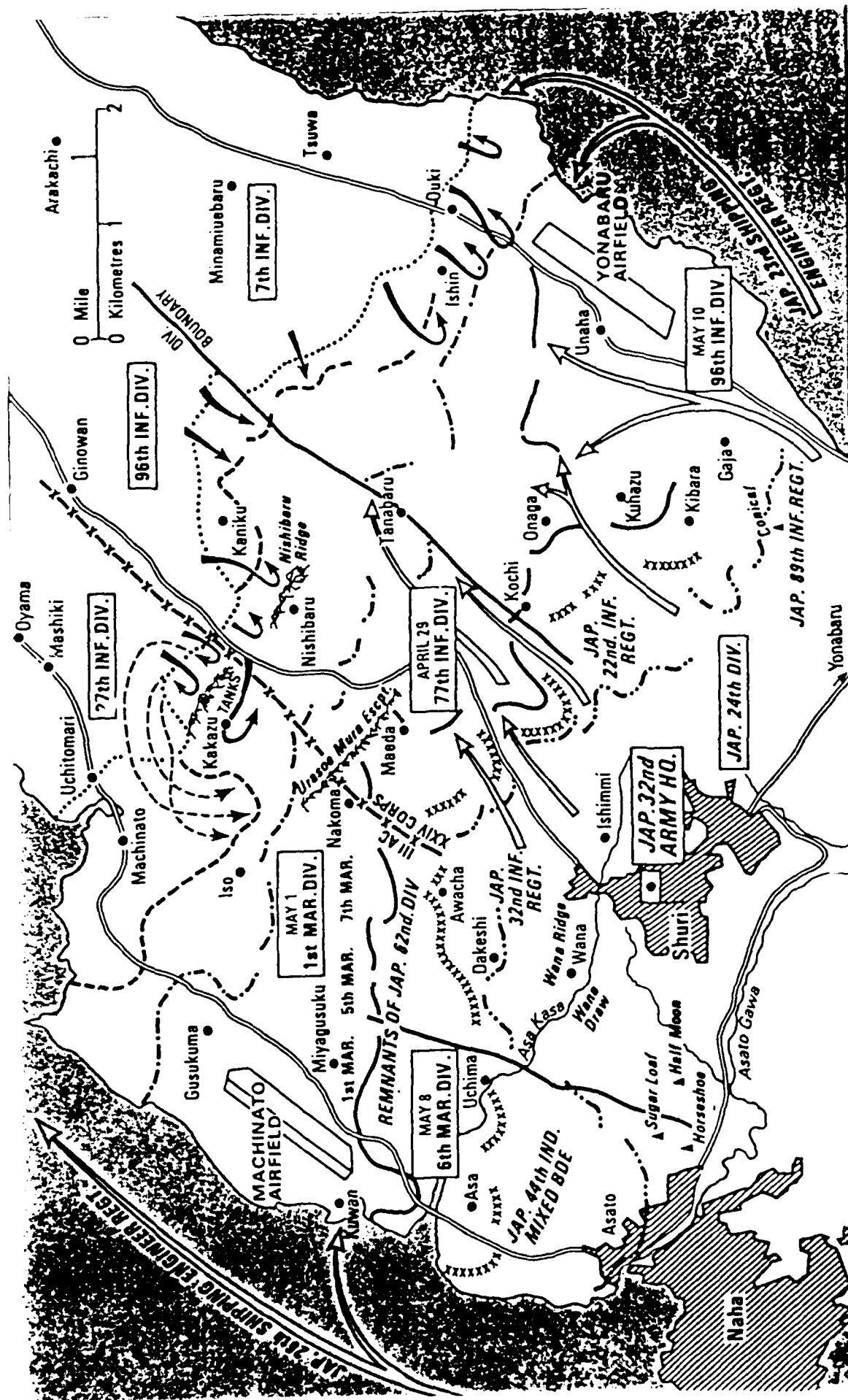
SEIZURE of KERAMA RETTO MARCH 1945

Scale 1:100,000

MAP 7

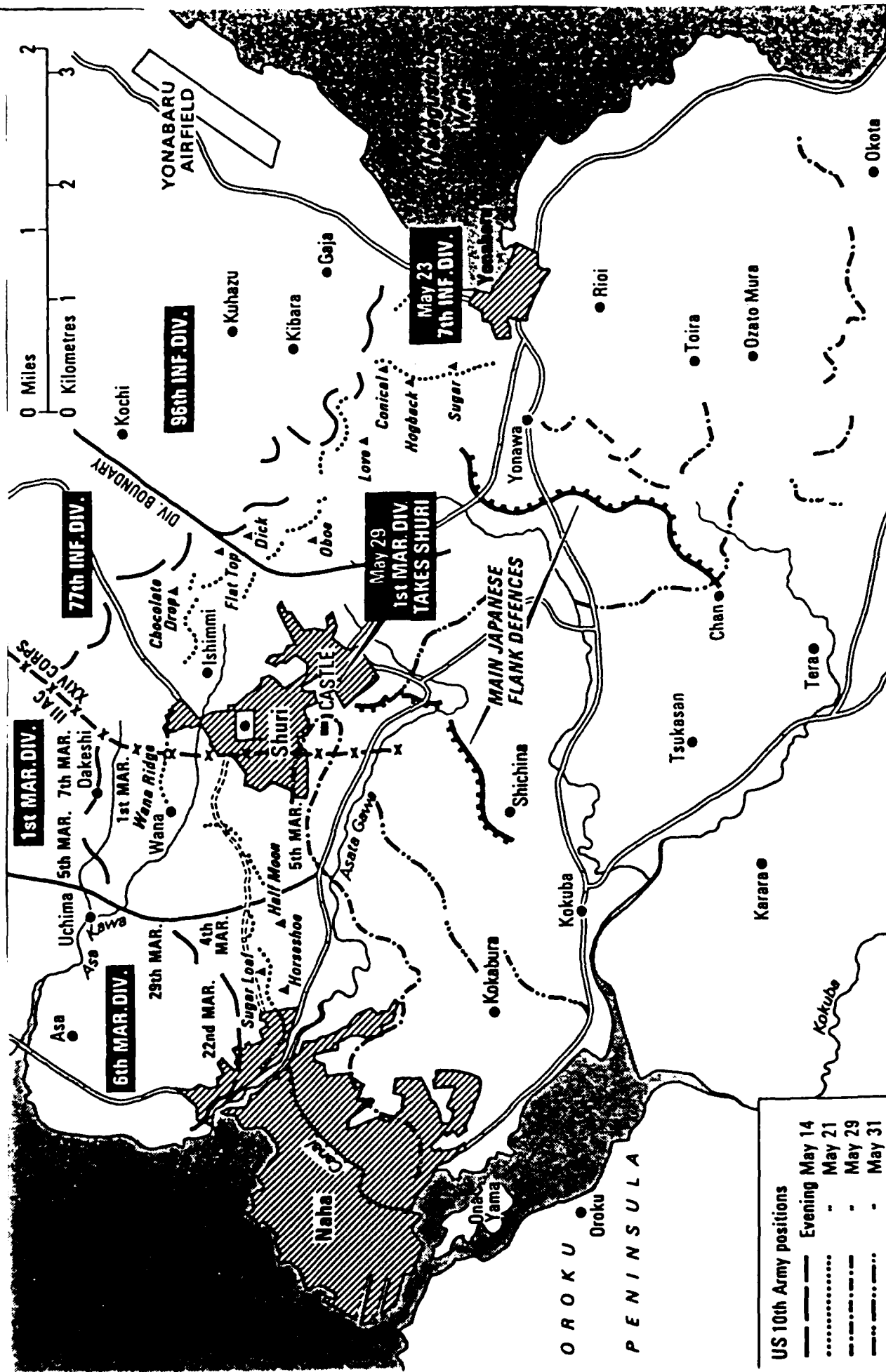


APPENDIX H SOURCE: Nichols and Shaw, Okinawa: Victory in the Pacific, p. 39.



US 10th Army positions
 0600 Hrs. April 19
 Evening April 19
 Evening May 10
 Evening May 14
 US attacks April 19
 Japanese counteroffensive May 4/5

APPENDIX I SOURCE: Frank, Okinawa: Capstone to Victory, p.88.



APPENDIX J SOURCE: Frank, Okinawa: Capstone to Victory, p. 116.

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